



Florida's Wildfire Mitigation Teams Set State on Fire – on Purpose

Full Mitigation Best Practice Story

State-wide, Florida

The State of Florida - In 1998, Florida suffered one of the worst series of wildfire events on record. Heavy plant growth in previous seasons, followed by hard winter freezes, led to an abundance of dead vegetation. Months of serious drought conditions caused the dead vegetative matter to dry up. These were very hazardous conditions – like a tinderbox waiting to be ignited.



Beginning in April 1998, as many as 80 simultaneous wildfires were reported on any given day. By mid-July, more than 2,000 fires had consumed almost half a million acres across the state.

A task force was created to address the growing wildfire threat. Ultimately, the task force formed four regional wildfire mitigation teams whose primary task is to reduce the vegetation that provides fuel for wildfires. "The biggest factor contributing to the dangers of wildfire are the fuels that we have here in Florida," said Gerry LaCavera, a wildfire mitigation specialist in the Division of Forestry. "We have a unique blend of vegetation containing a volatile mixture of oils, waxes, and resins," he added.

Vegetative fuel sources can catch fire easily, burn intensely, and spread flames rapidly. Embers blowing ahead of the fires can touch down on distant fuel sources creating the danger of even more widespread wildfires. To tackle the fuel problem, the wildfire mitigation teams reduce vegetation through mechanical means and prescribed burns.

"Typically in a wildland fire, the height of the flames soars two to three times the height of the fuel," noted Mr. LaCavera. "An 8-foot palmetto stand means you're looking at 24-foot flames. By using specialized machinery to reduce the height of the vegetation to 6 inches, we're lowering the flames to 18 inches," he explained.

Mini-bulldozers reduce small growths of vegetation, in much the same way as a lawn mower. Using heavy equipment that includes a grinding head, task force members knock down larger stands of saw palmetto, Melaleuca, and other stubborn plant life; the vegetation is then grounded into mulch. Lowering fuel height in this manner reduces the severity of fires because it helps firefighters gain significant ground once a wildfire is underway.

Before the expansion of housing developments into wildland areas, wildfires ignited by lightning burned freely, thus clearing overdeveloped undergrowth and plant life every three to five years. Starting in the 1950s, however, as Florida's population grew and urban development increased, firefighters quickly extinguished wildfires to protect human life and property. By stopping the natural fuel consumption of free burning lightning fires, buildup of volatile fuel sources grew to dangerous levels. This allowed fires to quickly reach a magnitude that made them extremely difficult to combat.

A technique called prescribed burning is now carried out to minimize the wildfire problem. When weather and geographic conditions are favorable, and with firefighting equipment on hand, mitigation teams safely ignite and manage fires to reduce fuels in wildland areas. Prescribed burns often follow mulching, which gives the teams a greater degree of control over the fires. The prescribed burns can cover small areas of one or two acres, or up to as large as 1,000 acres. This approach has been so successful that prescribed burns are widely accepted as a smart and effective tool for preventing wildfires.

Another important assignment carried out by the teams is promoting the benefits of wildfire mitigation through community education and outreach programs. Team members develop and present educational publications and displays for use in the community, and offer workshops to teach home and business owners about wildfire mitigation. The workshops cover topics such as weather conditions, fuel reduction techniques, and ways to protecting homes and businesses from fires, such as through fire-resistant construction materials.

"I like to tell my audiences that when they're done [with the workshop], they're going to have a mini-Ph.D. in fire behavior," said Mr. LaCavera. The teams have even introduced wildfire mitigation material to local schools, several of which have added the subject to their science curriculums.

The Florida Division of Forestry provides the majority of the annual budget for the wildfire mitigation teams. Supplemental assistance is also provided by the United States Forestry Service through the National Fire Plan.

When asked about the cost of wildfire mitigation versus the savings, Mr. LaCavera replied, "One day of prescribed burning this year cost \$4,018. With that one burn, we protected 352 homes, 42 apartment buildings, three businesses, and 15 acres of property. The total value of everything we made safe was conservatively estimated at \$49 million. That's not bad for a \$4,000 investment."

Activity/Project Location

Geographical Area: **State-wide**

FEMA Region: **Region IV**

State: **Florida**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Wildfire**

Activity/Project Type: **Education/Outreach/Public Awareness; Vegetation Management**

Activity/Project Start Date: **07/1998**

Activity/Project End Date: **Ongoing**

Funding Source: **State sources; Other Federal Agencies (OFA); Other FEMA funds/ US Department of Homeland Security**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **No**

Value Tested By Disaster? **Unknown**

Repetitive Loss Property? **Unknown**

Reference URLs

Reference URL 1: **<http://www.firewise.org>**

Reference URL 2: **http://www.fl-dof.com/wildfire/rx_index.html**

Main Points

- In 1998, Florida suffered one of the worst series of wildfire events on record.
- Heavy plant growth in previous seasons, followed by hard winter freezes, led to an abundance of dead vegetation. Months of serious drought conditions caused the dead vegetative matter to dry up.
- Beginning in April 1998, as many as 80 simultaneous wildfires were reported on any given day. By mid-July, more than 2,000 fires had consumed almost half a million acres across the state.
- A task force was created to address the growing wildfire threat. Ultimately, the task force formed four regional wildfire mitigation teams whose primary task is to reduce the vegetation that provides fuel for wildfires.
- Mini-bulldozers reduce small growths of vegetation, in much the same way as a lawn mower. Using heavy equipment that includes a grinding head, task force members knock down larger plants and grind them into mulch.
- A technique called prescribed burning is now carried out to minimize the wildfire problem. When weather and geographic conditions are favorable, and with firefighting equipment on hand, mitigation teams safely ignite and manage fires to reduce fuels in wildland areas.
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Wildfire mitigation team member



Gerry LaCavera